



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/931,064	08/17/2001	Satoshi Arakawa	Q63766	2592
7590	02/01/2005		EXAMINER	
SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC 2100 Pennsylvania Avenue, N.W. Washington, DC 20037-3213				LEE, SHUN K
		ART UNIT		PAPER NUMBER
		2878		

DATE MAILED: 02/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.



UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS  
UNITED STATES PATENT AND TRADEMARK OFFICE  
P.O. Box 1450  
ALEXANDRIA, VA 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 09/931,064  
Filing Date: August 17, 2001  
Appellant(s): ARAKAWA, SATOSHI

**MAILED**  
FEB 1 2005  
**GROUP 2800**

Jason C. Beckstead  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 9 December 2004 appealing from the Office action mailed 3 May 2004.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

The following is a listing of the evidence (e.g., patents, publications, Official Notice, and admitted prior art) relied upon in the rejection of claims under appeal.

4,733,307                    WATANABE                    3-1988

4,810,874                    TORII                        3-1989

4,965,455	SCHNEIDER <i>et al.</i>	10-1990
6,365,909	HAYAKAWA <i>et al.</i>	4-2002

### **(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Issue A: *claims 1-4, 7-11, 17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayakawa et al. (US 6,365,909) in view of Torii (US 4,810,874).*

In regard to claims 1 and 9-11, Hayakawa *et al.* disclose (Figs. 1, 4, 19, and 25) an image information reading apparatus comprising:

- (a) a support table (4) for placing thereon a stimulable phosphor sheet (12) with radiation image information recorded therein;
- (b) displaceable stimulating light applying means (510, 511, 512, 513) for applying stimulating light to the stimulable phosphor sheet (12);
- (c) displaceable light collecting means (514) for collecting light which is emitted from said stimulable phosphor sheet (12) upon exposure to said stimulating light; and
- (d) a photoelectric transducer mechanism (514a) for converting the collected light to an electric signal;

the arrangement being such that while said stimulating light applying means (510, 511, 512, 513) is facing and being displaced with respect to said stimulable phosphor sheet (12), said stimulating light applying means (510, 511, 512, 513) applies said stimulating light to said stimulable phosphor sheet (12), and while said

light collecting means (514) is being displaced with respect to said stimulable phosphor sheet (12), said light collecting means (514) collects light emitted from said stimulable phosphor sheet (12) and reads radiation image information from the collected light.

The apparatus of Hayakawa *et al.* lacks that the stimulable phosphor sheet is housed in a container comprising a container casing having a groove defined therein is exposed to stimulating light when an openably, closably, and removably mounted container lid having a side edge slidably fitted in the groove and a tab projecting from a side edge thereof is opened. However, stimulable phosphor cassettes are well known in the art. For example, Torii teaches (Figs. 1-3) that a stimulable phosphor cassette comprising a lid (3B) having a tab projecting from a side edge thereof and slidably fitted into a container casing (3A), in order to perform read-out without removing the sheet from the cassette so as to minimized scratches and damage (column 2, lines 18-33). Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to provide a lid having a tab and slidably fitted into a container housing the stimulable phosphor sheet (12) in the apparatus of Hayakawa *et al.*, in order to perform read-out without removing the sheet from the cassette so as to minimized scratches and damage as taught by Torii.

In regard to claim 4 which is dependent on claim 1, Hayakawa *et al.* also disclose (column 20, line 28 to column 21, line 48) a lifting and lowering mechanism for lifting and lowering said support table (4).

In regard to claim **2** (which is dependent on claim 1) and claim **7** (which is dependent on claim 4), Hayakawa *et al.* also disclose (Figs. 1, 13, and 19) that said stimulating light applying means (510, 511, 512, 513) and said light collecting means (514) are coupled to each other (in image reading section 5) for displacement in unison with each other.

In regard to claim **3** (which is dependent on claim 2) and claim **8** (which is dependent on claim 7), Hayakawa *et al.* also disclose (Figs. 13, 18, and 19) a displacing mechanism for displacing said stimulating light applying means (510, 511, 512, 513) and said light collecting means (514), said displacing mechanism comprising a ball screw (501) operatively connected to said stimulating light applying means (510, 511, 512, 513) and said light collecting means (514) and a motor (502) for rotating said ball screw (501) about its own axis.

In regard to claim **17** (which is dependent on claim 1) and claim **18** (which is dependent on claim 4), Hayakawa *et al.* also disclose (Fig. 25) that said support table (4) functions in a substantially horizontal manner (*i.e.*, horizontal orientation).

Issue B: *claims 5, 6, 15, 16, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayakawa et al. (US 6,365,909) in view of Torii (US 4,810,874) as applied to claim 4 above, and further in view of Schneider et al. (US 4,965,455).* In regard to claims **5, 6, 15, and 16** which are dependent on claim 4, the modified apparatus of Hayakawa *et al.* lacks that said lifting and lowering mechanism comprises a plurality of support shafts rotatably mounted on a base and operatively connected to said support table and a plurality of motors for rotating said support shafts respectively

about their own axes to lift and lower said support table, and that said motors have respective rotatable shafts with respective worms fitted thereover, said support shafts supporting respective worm gears fitted thereover and held in mesh with said respective worms, whereby said support shafts can be rotated about their own axes by said worms and said worm gears when said motors are simultaneously energized. However, translation stages are well known in the art. For example, Schneider *et al.* teach (column 5, lines 42-49) that belts, chains, worm drives, or rack drives are functional translation stage equivalents. Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to provide worm drives as the lifting and lowering mechanism in the modified apparatus of Hayakawa *et al.* as functional equivalents to the conveyance belts of Hayakawa *et al.*

In regard to claim 20 which is dependent on claim 15, Hayakawa *et al.* is applied as in claim 17 above.

Issue C: claims 12, 13, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayakawa *et al.* (US 6,365,909) in view of Torii (US 4,810,874) as applied to claim 1 above, and further in view of Watanabe (US 4,733,307). In regard to claims 12 and 13 which are dependent on claim 1, the modified apparatus of Hayakawa *et al.* lacks that the light collecting means and the stimulating light applying means are displaceable by separate displacement mechanisms, wherein each said separate displacement mechanism comprises a motor that is energizable in synchronism with each motor of other said separate displacement mechanisms. Watanabe teaches (column 18, lines 5-63) to provide separate displacement motors

instead of a single motor in order to obtain a desired movement plane angle. Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to provide separate displacement motors in the modified apparatus of Hayakawa *et al.*, in order to obtain a desired movement plane angle as taught by Watanabe.

In regard to claim 19 which is dependent on claim 12, Hayakawa *et al.* is applied as in claim 17 above.

#### **(10) Response to Argument**

##### Issue A:

Appellant argues (last two paragraphs on pg. 10 of appeal brief filed 9 December 2004) that Hayakawa *et al.* fail to teach or suggest a support table which holds the container housing the phosphor sheet while the light applying and collecting means displace with respect to the stimulable phosphor sheet housed in the container. In response to appellant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

It should be noted that Hayakawa *et al.* expressly disclose (Figs. 1, 4, 19, and 25) an arrangement where the stimulating light applying means (510, 511, 512, 513) is facing and being displaced with respect to the stimulable phosphor sheet (12) placed on a support table (4) which is oriented in a horizontal direction (e.g., perpendicular to the vertical direction; see Fig. 25) and the light collecting means (514) is being displaced

with respect to the stimulable phosphor sheet (12) with the stimulating light applying means (510, 511, 512, 513) applying the stimulating light to the stimulable phosphor sheet (12) and the light collecting means (514) collecting light emitted from the stimulable phosphor sheet (12) and reads radiation image information from the collected light.

Appellant then argues (last three paragraphs on pg. 11 of appeal brief filed 9 December 2004) that Torii fails to teach or suggest a support table which holds the container housing the phosphor sheet while the light applying and collecting means displace with respect to the stimulable phosphor sheet housed in the container since the conveyor belt of Torii is not a support table. In response to appellant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In this case, Torii teaches (Figs. 1-3) that a stimulable phosphor cassette comprising a lid (3B) having a tab projecting from a side edge thereof and slidably fitted into a container casing (3A), in order to perform read-out without removing the sheet from the cassette so as to minimize scratches and damage (column 2, lines 18-33). Thus it would have been obvious to one having ordinary skill in the art at the time of the invention to provide a lid having a tab and slidably fitted into a container housing the stimulable phosphor sheet in the apparatus of Hayakawa *et al.*, in order to perform read-out without removing the sheet from the cassette so as to minimize scratches and

damage as taught by Torii. Therefore, the combination of the references teach or suggest all features recited in the independent claim.

Appellant further argues (first paragraph on pg. 12 of appeal brief filed 9 December 2004) that the claims are unobvious since it does away with the phosphor handling system 4 of Hayakawa *et al.* and the conveyor belt system 30 of Torii while retaining the function of stimulating and reading from a phosphor sheet. In response to appellant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

First it is noted that stimulating and reading from a phosphor sheet is a function of the entire apparatus. As discussed above, it would have been obvious to one having ordinary skill in the art at the time of the invention to provide a lid having a tab and slidably fitted into a container housing the stimulable phosphor sheet in the apparatus of Hayakawa *et al.*, in order to perform read-out without removing the sheet from the cassette so as to minimize scratches and damage as taught by Torii. Further, it is noted that the function of the phosphor handling system 4 of Hayakawa *et al.* and the conveyor belt system 30 of Torii is to support the stimulable phosphor sheet. Appellant's arguments fail to explain how the function of supporting the stimulable phosphor sheet is retained while doing away with the support table (4) of Hayakawa *et al.* since the claims recite a "support table" for supporting the stimulable phosphor sheet.

Issues B and C:

Appellant argues that the dependent claims are allowable for the same reason that independent claim 1 is allowable. Examiner respectfully disagrees for the reasons discussed above.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

SL  
January 21, 2005

Conferees

Shun Lee, Art Unit 2878 *SL*

David Porta, SPE, Art Unit 2878 *DP*

Olik Chaudhuri, SPE, Art Unit 2823 *OC*



DAVID PORTA

SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800

SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC  
2100 Pennsylvania Avenue, N.W.  
Washington, DC 20037-3213